U.S. Department of the Interior Bureau of Land Management

Environmental Assessment

Humboldt County Mayhew Drive Right-of-Way DOI-BLM-NV-W010-2012-0048-EA

November 2013

PREPARING OFFICE

U.S. Department of the Interior Bureau of Land Management Winnemucca District, Humboldt River Field Office 5100 E. Winnemucca Blvd. Winnemucca, NV 89445 775–623–1500 wfoweb@blm.gov



Environmental Assessment Humboldt County Mayhew Drive Right-of-Way DOI-BLM-NV-W010-2012-0048-EA

Prepared by
U.S. Department of the Interior
Bureau of Land Management
Winnemucca District Office
Humboldt River Field Office
Winnemucca, NV

November 2013 BLM/NV/WN/EA/13–17+1792

Table of Contents

1. Introduction	. 1
1.1. Identifying Information:	1
1.1.1. Title, EA number, and type of project:	
1.1.2. Location of Proposed Action:	
1.1.3. Name and Location of Preparing Office:	
1.1.4. Identify the subject function code, lease, serial, or case file number:	
1.1.5. Applicant Name:	
1.2. Background Information	
1.3. Purpose and Need for Action:	
1.4. Decision to be Made	
1.5. Scoping, Public Involvement and Issues:	
1.5. Scoping, Fuone involvement and issues.	. ∠
2. Proposed Action and Alternatives	. 4
2.1. Description of the Proposed Action:	. 5
2.1.1. Environmental Protection Measures	. 6
2.2. Description of Alternatives Analyzed in Detail:	
2.3. Alternatives Considered but not Analyzed in Detail	
2.4. Conformance	
2.5. Relationship to Laws, Regulations, and Other Plans	
3. Affected Environment:	10
3.1. Introduction	11
3.2. Affected Resources	
3.2.1. Air Quality	12
3.2.2. Cultural Resources	13
3.2.3. Environmental Justice	13
3.2.4. Invasive and Nonnative Species	14
3.2.5. Migratory Birds	14
3.2.6. Native American Religious Concerns	15
3.2.7. Threatened and Endangered Species	15
3.2.8. Lands and Realty	
3.2.9. Paleontology	16
3.2.10. Public Health and Safety	
3.2.11. Recreation	16
3.2.12. Social Values and Economics	17
3.2.13. Soils	
3.2.14. Special Status Species	
3.2.15. Vegetation	
3.2.16. Visual Resources	
3.2.17. Wildlife	
4 Environmental Effects:	21

4.1. Direct and Indirect Impacts	22
4.1.1. Air Quality	
4.1.2. Cultural Resources	22
4.1.3. Environmental Justice	22
4.1.4. Invasive and Nonnative Species	23
4.1.5. Migratory Birds	23
4.1.6. Lands and Realty	
4.1.7. Public Health and Safety	
4.1.8. Recreation	
4.1.9. Social Values and Economics	
4.1.10. Soils	
4.1.11. Special Status Species	
4.1.12. Vegetation	
4.1.13. Visual Resources	
4.1.14. Wildlife	
4.2. Cumulative Impacts	
4.2.1. Assumptions for Cumulative Analysis	
4.2.2. Past and Present Actions	
4.2.3. Reasonably Foreseeable Future Actions	
4.2.4. Cumulative Impacts to Affected Resources	
4.2.4.1. Environmental Justice	
4.2.4.2. Invasive and Nonnative Species	
4.2.4.3. Migratory Birds, Special Status Species and Wildlife	
4.2.4.4. Social Values and Economics	
4.2.4.5. Soils and Vegetation	33
5. Recommended Mitigation and Monitoring	35
5.1. Proposed Action	36
5.2. No Action Alternative	
5.2. 1\0 1 totoli 1 itoliiau v	
6. Tribes, Individuals, Organizations, or Agencies Consulted	37
6.1. Consultation	38
6.2. Public Involvement/Outreach	38
7. List of Preparers	39
8. Maps	41
9. References	43

List of Maps

Map	1.	 42
Mar	2.	42

November 2013 List of Maps

List of Tables	
Table 3.1. Supplemental Authorities (Critical Elements of the Human Environment)	11
Table 3.2. Additional Affected Resources	12
Table 3.3. Migratory Avian Species Commonly Associated with Habitat in the Mayhew ROW	
Area	15
Table 3.4. BLM Sensitive Mammals	18
Table 3.5. BLM Sensitive Birds	18
Table 3.6. BLM Sensitive Plants	18
Table 3.7. BLM Sensitive Insects	18
Table 3.8. – BLM Visual Resource Management Classes	19
Table 3.9. Mammals Typically Associated With the Habitat in the Mayhew ROW	20
Table 3.10. Reptiles Typically Associated With the Habitat in the Mayhew ROW	20

Table 7.1. List of Preparers 40

November 2013 List of Tables

This page intentionally left blank

Chapter 1. Introduction

This page intentionally left blank

1.1. Identifying Information:

1.1.1. Title, EA number, and type of project:

Humboldt County Mayhew Drive Right-of-Way

DOI-BLM-NV-W010-2012-0048-EA

1.1.2. Location of Proposed Action:

T. 37 N. R. 38 E., sec. 9, SWSE;

T. 37 N. R. 38 E., sec. 16, W2NE.

Humboldt County, Nevada

1.1.3. Name and Location of Preparing Office:

Lead Office - Humboldt River Field Office and number W010

1.1.4. Identify the subject function code, lease, serial, or case file number:

Subject function code: 2800

Case file number: N-89480

1.1.5. Applicant Name:

Humboldt County

1.2. Background Information

The Humboldt County Road Department (Humboldt County) is seeking a right-of-way (ROW) along Mayhew Drive, Bronco Drive, and Bruce Drive, in the subdivision known as the Sand Dunes, located off Highway 95 approximately 9 miles north of the city of Winnemucca. Residents access the area via Artemesia Way, McRae Road, and Delaney Drive (Map 1: Project Area Map). At one time the area was accessible via Bruce Drive, but the Nevada Department of Transportation (NDOT) fenced off this access due to an expired permit.

In October of 2010, the Humboldt County Commissioners addressed the issue of an unauthorized road on BLM land paralleling Highway 95 from Delaney to Bruce Drive. In order to prevent unauthorized travel on the east side of Highway 95, it was determined a road would be warranted between Delaney Drive and Bruce Drive. Mayhew Drive is the nearest road to Highway 95 that would provide for north/south travel between Bruce Drive to Sweetbriar Lane. Humboldt County proposes to extend Mayhew Drive and to convert Bronco Drive and Bruce Drive from non-maintained roads to county maintained roads. In order to accomplish this, a ROW from the Bureau of Land Management (BLM) would be necessary.

Road closures are not being considered at this time. At sometime in the future, Humboldt County may consider removing access to Highway 95 from one of the roads identified above. If this were to occur, Humboldt County would work with NDOT and the public to determine which closure would be most effective. The current ROW proposal is not dependent on any possible closures. The proposed action being analyzed in this EA only addresses the ROW application.

1.3. Purpose and Need for Action:

Purpose

The purpose of this Federal action is to allow Humboldt County to construct a new road and to upgrade existing roads to County maintained roads.

Need

The need for action is established by BLM's responsibility under the Federal Land Policy and Management Act of 1976 (FLPMA) (Section 501), and BLM regulations at 43 Code of Federal (CFR) 2800, to process ROW applications.

1.4. Decision to be Made

Whether to authorize a ROW to Humboldt County as proposed and described in <u>Section 2.1</u>, "Description of the Proposed Action:".

1.5. Scoping, Public Involvement and Issues:

A scoping process was conducted in order to determine the scope of this environmental analysis. The scoping process began with an interdisciplinary team meeting held at the BLM office in Winnemucca on April 9, 2012. At this meeting, the BLM staff defined known issues and made an initial determination of what needed to be analyzed in this EA (see Chapter 3 Affected Resources), data needs, possible alternatives, and public outreach needs.

External scoping followed where other agencies, tribes, local governments, and the general public, including organizations, were provided an opportunity to offer feedback regarding issues, concerns, data needs, and such things as potential alternatives to the Proposed Action. This assists the BLM in refining issues, identifying any new issues, coordination needs, and possible alternatives.

Letters and maps describing the proposed action were sent to approximately 290 potentially interested public on September 5, 2012. The scoping letter and map were also posted on the BLM's Winnemucca District National Environmental Policy Act (NEPA) website http://www.blm.gov/nv/st/en/fo/wfo/blm_information/nepa0.html.

Government-to-government consultation was conducted with affected tribal governments (see Chapter 6, *Tribes, Individuals, Organizations, or Agencies Consulted*).

Based on internal and external scoping, issues raised and identified regarding the proposal are as follows:

• How would the proposed action impact air quality?

- How would the proposed action affect cultural resources?
- Would the proposed action lead to the spread of invasive/non-native plant species?
- How would access to the Sand Dunes subdivision and to Highway 95 change?
- How would the proposed action impact public health and safety?
- Would access to the sand dune recreational area be increased as a result of the proposed action?
- What would be the economic impact to the residents of the subdivisions and to the residents of Humboldt County be?

November 2013 Chapter 1 Introduction

Chapter 2. Proposed Action and Alternatives

2.1. Description of the Proposed Action:

Humboldt County seeks a perpetual ROW in order to extend Mayhew Drive and to upgrade Bronco Drive and Bruce Drive to County maintained roads (see Map 1: Project Area Map). The proposed ROW would be a total distance of approximately of 5,905 feet (approximately five acres) and the width would vary on each section of road. Road improvement activities would occur as follows:

Bronco Drive

Bronco Drive terminates before Highway 95. Humboldt County currently holds a 30 foot easement from the private land holder on the south side of the street. Humboldt County seeks a 30 foot ROW from BLM on the north side of the street from the intersection of Bronco and Mayhew westward to the north-south border of BLM property near Highway 95, for a distance of approximately 1,375 feet.

Humboldt County would use this ROW to convert Bronco Drive from a two-track road to a county maintained road for the entire length of the ROW. Method of construction is described below. Access to Highway 95 from Bronco Drive would not be created.

Mayhew Drive

Humboldt County currently holds a 30 foot easement on Mayhew Drive from the private land holder on the east side of Mayhew Drive between Bronco Drive and Sarah Way. Humboldt County seeks a 30 foot ROW from BLM on the west side of Mayhew Drive between Bronco Drive and Sarah Way, for an approximate distance of 1,325 feet. At Sarah Way the BLM ROW would widen to 60 feet between Sarah Way and Bruce Drive for a distance of approximately 2,665 feet.

Humboldt County would use this portion of the ROW to extend Mayhew Drive from Sarah Way to Bruce Drive. Method of construction is described below.

Bruce Drive

Bruce Drive terminates where the proposed Mayhew Drive extension would be located. Humboldt County currently holds a 30 foot easement on the north side of Bruce Drive from the private land holder. Humboldt County seeks a 30 foot ROW on the south side of this street from the Highway 95 ROW eastward to the proposed Mayhew Drive extension that would total approximately 540 feet in length.

Humboldt County would use this ROW to convert Bruce Drive to a County maintained road for the entire length of the ROW. Method of construction is described below. Access to Highway 95 from Bruce Drive would not be created.

Construction

Roads would be upgraded or constructed with crushed aggregate on the travel portion of the road with open v-ditch drainage structures on both sides of the roadway for the entire length. Gravel would be derived from local private sources. Eighteen inch drain pipes, culverts, corrugated metal pipe or high density

polyethylene construction would be installed at all roadway intersections to facilitate the flow of water. The finished road widths would be 24 feet.

No turnouts would be needed, but a permanent 50 foot wide radius for an approach would be necessary along Mayhew Drive at the intersections at Bronco Drive, Baker Lane, Sarah Way, Delaney Drive, Shirley Drive, and Bruce Drive. This would accommodate the turning capacity for larger vehicles.

Construction equipment for all phases of the project would include a dozer, loader, backhoe, grader, water truck, and a dump truck. The construction time frame would be two years from the grant of the ROW. The construction cost estimate is approximately \$50,000 with an estimated annual maintenance and operation cost of \$14,000, derived from the County's annual budget for road maintenance.

Maintenance

Bronco, Bruce, and Mayhew roads would be placed on the County's routine maintenance schedule. Sand removal from the maintained roads would occur on an as-needed bases; with a minimum of three times per year. The road would be graded two to four times a year or as needed.

2.1.1. Environmental Protection Measures

Humboldt County has committed to the following environmental protection measures to prevent unnecessary or undue environmental degradation during construction, operation, and reclamation activities of the proposed action. The measures are derived from the general requirements established in BLM Rights-of-Way under The Federal Land Policy Management Act Regulations at 43 CFR 2800.

Air Quality

During all phases of road construction a water truck would be provided by Humboldt County to supply water to the site to reduce fugitive dust.

Sensitive Plants

There are four BLM special status plants and a state listed plant, Lahontan indigobush (*Psorothamnus kingii*)(see <u>Table 3.6</u>, "<u>BLM Sensitive Plants</u>") that have the potential to be in the proposed disturbance areas. The BLM would conduct plant surveys at the appropriate season(s) prior to any disturbance activity. Humboldt County would notify BLM of proposed disturbance activities at least 30 days in advance to allow BLM to schedule surveys. Any identified sensitive species within the proposed route would be transplanted by the BLM biologist or their representative. All vehicles and construction disturbance would be limited to areas within the ROW as described above.

Migratory/ Sensitive Species Birds

Land clearing or other surface disturbance associated with the proposed action would be conducted outside of the migratory avian breeding season, whenever feasible, to avoid potential destruction of active bird nests. Nests are considered active if they contain eggs or young or if evidence of reproductive behavior (i.e. mated pairs, courtship displays, territorial defense, carrying nesting materials, transporting food, etc.) is observed (MBTA 1918). When surface

disturbance must be created during the migratory avian breeding season, (March 1 – August 31), a survey performed by a BLM biologist following BLM protocols would be conducted for active nests. Humboldt County would notify BLM of disturbance activities at least 30 days in advance to allow BLM to schedule surveys. This survey would be conducted no more than 10 days prior to and no less than 3 days prior to proposed disturbance activities. If active nests are located, a protective buffer, (the size of which would be depend upon the habitat requirement of the species, but no less than 260 feet) would be delineated and the entire buffer area avoided to prevent destruction or disturbance to the nest or reproductive behaviors until the nests are no longer active. The start and end dates of the seasonal restriction may be based upon site-specific information such as elevation and weather patterns which affect breeding chronology.

Any raptor nest located would be monitored during the nesting season (January 1 — August 31) for nesting activity by the BLM biologist following BLM protocols. Occupied nests are those nests repaired or tended in the current year by a pair of raptors. Presence of raptors (adults, eggs, or young), evidence of nest repair or nest marking, freshly molted feathers or plucked down, or current year's mute remains (whitewash) suggests site occupancy. Additionally, all nest sites within a nesting territory are deemed occupied while raptors are demonstrating pair bonding activities and developing an affinity to a given area (USFWS 2002). A nest remains occupied throughout the periods of initial courtship and pair bonding, egg laying, incubation, brooding, fledging, and post fledging dependency of the young. If present, active raptor nests would be avoided following temporal and spatial restrictions and recommendations specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances (USFWS 2002).

Sensitive Wildlife

Small Mammals

The proposed disturbance area is in dark kangaroo mouse (*Micropodops megacephalus*) and pale kangaroo mouse (*Micropodops pallidus*), habitat. Humboldt County assumes the presence of these animals in the project area. In order to offset potential impacts to these species due to this project, the BLM would restore/reclaim BLM land adjacent to the disturbed areas and would include treatments to remove cheatgrass (*Bromus tectorum*), and other invasive and noxious plants to reduce competition with native plants present and seeding/planting efforts. Minimal disturbance methods (i.e. hand-seeding/planting, minimal soil disturbance, etc.) would be implemented in habitat restoration efforts in areas that are dominated by native plants. Restoration efforts and monitoring would continue for the duration of three (3) years post-construction, or less if the standards for the Ecological Site Description (ESD) are reached prior.

Vegetation

BLM would seed construction disturbance areas. Seeding of construction disturbance (the construction footprint that remains and is not part of the active roadbed) would include the following seed mixes:

Species Common Name	Scientific Name	PLS LBS/Acre	Bulk LBS/Acre	PLS/sq. ft.
Fourwing saltbush	Atriplex canescens	3.00	5.00	4
Shadscale	Atriplex confertifolia	3.00	5.00	4
Indian ricegrass	Achnatherum hymenoides	3.00	3.75	12

Siberian wheatgrass	Agropyron fragile	2.00	2.50	7
Totals:		11.00	16.25	27

2.2. Description of Alternatives Analyzed in Detail:

No Action Alternative.

Mayhew Drive would not be extended and Bruce and Bronco Drives would continue to be non-maintained roads. The use of the unauthorized and un-maintained road along the east side of Highway 95 would continue.

2.3. Alternatives Considered but not Analyzed in Detail

Use of Tollhouse Road

The use of Tollhouse Road instead of Mayhew Drive was considered but dismissed due to the fact it is in a floodplain.

Widening Highway 95

During the scoping period, comments were received that suggested an alternative would be to widen Highway 95 to create more turn lanes and acceleration/deceleration lanes. This would not meet Humboldt County's goal of ceasing unauthorized travel along the eastern side of Highway 95.

2.4. Conformance

The proposed action described in this EA is in conformance with the Paradise-Denio Management Framework Plan (MFP) (BLM 1982). Although the Paradise-Denio MFP is silent on rights-of-way, this action is clearly consistent with the MFP's objectives, terms, conditions, and decisions. FLPMA Sec. 501(6) provides for authorizations of rights-of-way across public lands.

2.5. Relationship to Laws, Regulations, and Other Plans

FLPMA governs the BLM's administration of public lands unless they have been designated for restricted use, withdrawn, or congressionally designated. The lands involved in the proposed action (ROW application) have no restrictions, withdrawals or designations. The proposed action and alternative are consistent with State and local laws and the Humboldt County Regional Master Plan (December 2002) to the maximum extent consistent with Federal law and FLPMA, and are compliant with the following Federal laws and regulations:

- National Environmental Policy Act of 1969 (Public Law [PL] 91–190, 42 USC 4321 et seq.);
- Federal Land Policy and Management Act of 1976 (FLPMA) (PL 94-579, 43 USC 1701 et seq);
- 40 CFR 1500, Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the NEPA of 1969; and

• 43 CFR Part 46, Department of Interior regulations for the implementation of the NEPA of 1969.

Although the Project is located on public lands, the Project Area is zoned according to the Humboldt County Regional Master Plan and is primarily classified as zone M-3: low density development. This type of zoning is characterized by low density development and house lot sizes are generally an acre or more. Some agriculture is permitted.

Chapter 3. Affected Environment:

3.1. Introduction

To comply with the National Environmental Policy Act, the following elements of the human environment are subject to requirements specified in statute, regulation, or executive order and must be considered in analyzing the effects of a proposed action and alternatives. Not all of the critical elements that require inclusion in this EA will be present, or if they are present, may not be affected by the proposed action and alternative. Only those mandatory critical elements that are present and affected, or need to be considered, are described in this section. Table 3.1 identifies the supplemental authorities (formally referred to as the critical elements of the human environment) and whether each is not present, present and not affected, or present and potentially affected. Table 3.2 identifies additional affected resources that are present and potentially affected within the Project Area.

3.2. Affected Resources

Table 3.1. Supplemental Authorities (Critical Elements of the Human Environment)

Supplemental Authorities	Not Present	Present, Not	Present, Potentially Affected	Rationale
Air Quality	1 (of 1 reseme	Timeeted	X	See Section 3.2.1, "Air Quality"
Areas of Critical Environmental Concern (ACECs)	X			and the second s
Cultural Resources			X	See Section 3.2.2, "Cultural Resources"
Environmental Justice			X	See Section 3.2.3, "Environmental Justice"
Floodplains		X		,
Invasive and Nonnative Species			X	See Section 3.2.4, "Invasive and Nonnative Species"
Migratory Birds			X	See Section 3.2.5, "Migratory Birds"
Native American Religious Concerns		X		See Section 3.2.6, "Native American Religious Concerns"
Prime or Unique Farmlands	X			
Threatened & Endangered Species	X			See Section 3.2.7, "Threatened and Endangered Species"
Wastes, Hazardous or Solid	X			
Water Quality (Surface/Ground)		X		
Wetlands and Riparian Zones	X			
Wild and Scenic Rivers	X			
Wilderness	X			

Table 3.2. Additional Affected Resources

Additional Affected Resources	Not Present, Not Affected	Present, Potentially Affected	Comments
Lands and Realty		X	See Section 3.2.8, "Lands and Realty"
Lands with Wilderness Characteristics	X		The potential for wilderness characteristics within the project area was considered. Based on historical inventories and current reviews, the project area does not meet the Lands with Wilderness Characteristics criteria. No further analysis is recommended.
Paleontological Resources		X	See Section 3.2.9, "Paleontology"
Public Health and Safety		X	See Section 3.2.10, "Public Health and Safety"
Recreation		X	See Section 3.2.11, "Recreation"
Social Values and Economics		X	See Section 3.2.12, "Social Values and Economics"
Soils		X	See Section 3.2.13, "Soils"
Special Status Species		X	See Section 3.2.14, "Special Status Species"
Vegetation		X	See Section 3.2.15, "Vegetation"
Visual Resources		X	See Section 3.2.16, "Visual Resources"
Wildlife		X	See Section 3.2.17, "Wildlife"

The supplemental authorities identified in <u>Table 3.1</u> and the additional affected resources identified in <u>Table 3.2</u> as being not present or present and not affected will not be analyzed further in this document.

3.2.1. Air Quality

Air quality in Humboldt County is generally good. Climate is arid, characterized by warm, dry summers and moderately cold winters, precipitation mainly occurs in the winter and spring. Dust from barren agricultural fields, burned areas, or barren lands (playas & dunes) can contribute dust to the atmosphere for short periods during strong wind events. Wildfires in or outside the area, agricultural burns, or prescribed fires occasionally emit particulate matter (smoke) into the air, producing short-term deterioration of air quality. Air quality in Humboldt County is regulated by the Environmental Protection Agency (EPA) and the Nevada Division of Environmental Protection, Bureau of Air Pollution Control (BAPC) and Bureau of Air Quality Planning. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. EPA uses monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify those areas with air-quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are "non-attainment," "attainment," and "unclassified." "Unclassified" is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards.

The proposal is located within the following hydrographic region/basin: Northwest Region; Humboldt River Basin. Hydrographic regions/basins are also used as air regions/basins. This basin is considered "unclassified" relative to attainment of the federal air quality standards. Existing air quality is typical of largely undeveloped regions of the Western United States with limited sources of pollutants.

3.2.2. Cultural Resources

A range of prehistoric and historic sites are located in the general vicinity of the proposed project. The project falls within a continuously developing area of Humboldt County east of Highway 95 and just north of the Winnemucca City limits. For cultural analysis an area 1 mile around the area of potential effects (APE) was analyzed.

While the area has had limited inventory there are prehistoric lithic scatter sites known to occur from Highway 95 east towards the Little Humboldt River. The diagnostic artifacts largely consists of late prehistoric points found as part of small to moderate density scatters probably indicative of over-night, or otherwise briefly occupied, seasonal camps.

Segments of the "Old Emigrant Trail" and the "North Side Trail" are within five miles of the project area to the south. And generally follow the Little Humboldt and Humboldt Rivers.

Approximately 2.5 miles northeast of the project area is a site known as the "Toll House." The site was originally a stage route station built in the 1860s to collect tolls on the "Idaho Stage Route." As part of the Federal Drought Relief Program in the 1930s the site was made into a work camp consisting of a bunkhouse, well house and several corrals. Shortly thereafter the site was improved by the Civilian Conservation Corps (CCC). The site was used by the BLM as a way station until 1962 and then abandoned. Two structures were still standing in the early 1980s but there has been no recent site visits.

A Class III Cultural Resource Inventory was conducted by HRFO archaeologists Patrick Haynal and Mark Hall and District Archaeological Technician Fred Holzel (BLM 2012). No sites were found within the project area.

3.2.3. Environmental Justice

Two aspects of the vicinity of the proposed action raise concern with respect to environmental justice. The neighborhood in the immediate area of the proposed ROW has some of the characteristics of an economically disadvantaged community. Relationships between median income and the poverty level, property values, participation in public support programs, and unemployment rates are some of the typical measures of economic disadvantage. Home values in the neighborhood are substantially lower than those in Winnemucca in general, Humboldt County, the State of Nevada, or the U.S.:

Median Home Values (Owner-occupied)		Proposed ROW Neighborhood Median Home Value as a Percent of Comparison Community Median Home Values:
Mayhew ROW Neighborhood	\$35,611	
(2013-14 taxable value)		
Winnemucca (2007-11)	\$164,300	21.7%
Humboldt County (2007-11)	\$144,000	24.7%
Nevada (2007-11)	\$225,400	15.8%
U.S. (2007-11)	\$186,200	19.1%

US Census Bureau 2012; Humboldt County (2013a)

In addition, in recent years the community of Winnemucca itself had a higher proportion of people who self-identify as being of Hispanic or Latino origin than did the reference populations of Humboldt County, the State of Nevada, or the U.S.:

Persons of Hispanic or Latino Origin			
Population	Percentage		
Winnemucca (2010)	27.4%		
Humboldt County (2011)	24.7%		
State of Nevada (2011)	27.1%		
U.S. (2011)	16.7%		

US Census Bureau 2012

3.2.4. Invasive and Nonnative Species

The BLM identifies target noxious weeds from the USDA Federal Noxious Weed List (USDA 2010) and the Nevada State Noxious Weed List (Nevada Department of Agriculture 2011). From these lists, 47 invasive, nonnative plant species are present in Nevada that require control. Of these, 13 species have been inventoried and are known to occur in the Winnemucca District (BLM 2013a). No state-listed noxious weeds have been inventoried within the proposed disturbance area. Non-native species within the vicinity include Cheatgrass (*Bromus tectorum*), Tumble-mustard (*Sisymbrium altissimum*), Russian thistle (*Salsola spp.* and Whitetop (*Cardaria draba*)). These species are widespread within both the project area and the low-elevation Wyoming sagebrush ecosystems across the Winnemucca District. The project area occurs within "checkerboard" lands, within which a large portion of the private landholdings have been developed as residential neighborhoods resulting in a high density of roads and other human disturbances. The site also occupies an area that is exceedingly sandy, as it is immediately adjacent to actively shifting sand dunes. The unstable sandy soils provide an exceedingly poor growing environment for most plants, including noxious weeds and other invasive plants.

3.2.5. Migratory Birds

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds commonly found in the United States, with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA) of 1918, as amended (16 U.S.C. 703 et seq.). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings without a permit. Executive Order 13186 signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction comes from the Memorandum of Understanding (MOU) between the BLM and the USFWS signed April 12, 2010. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the BLM and USFWS in coordination with state, tribal, and local governments. The MOU identifies management practices that impact populations of high priority migratory bird species including nesting, migration, or over-wintering habitats on public lands, and develops management objectives or recommendations that avoid or minimize these impacts.

The habitat in the proposed disturbance area is comprised primarily of big sagebrush shrubland, mixed salt desert scrub, and invasive annual grassland. A large expanse of greasewood flats is adjacent to the area. Because of the variability of plant species composition, planted trees and human made structures, a wide variety of migratory birds could utilize this habitat. However, some species are less likely to occupy the area due to human activities. Table 3.3, "Migratory Avian Species Commonly Associated with Habitat in the Mayhew ROW Area" provides a representative list of bird species associated with this type of vegetation, but omits those that are not likely to be in this particular area due to human encroachment.

Table 3.3. Migratory Avian Species Commonly Associated with Habitat in the Mayhew ROW Area

Common Name	Scientific Name
American kestrel (Falco sparverius)	Lark sparrow (Chondestes grammacus)
American robin (<i>Turdus migratorius</i>)	Loggerhead shrike (Lanius ludovicianus)
Black-billed magpie (Pica hudsonia)	Mourning dove (Zenaida macroura)
Black-throated sparrow (Amphispiza bileneata)	Northern harrier (Circus cyaneus)
Brewer's sparrow (Spizella breweri)	Northern mockingbird (Mimus ployglottos)
Common nighthawk (Chordelies minor)	Prairie falcon (Falco mexicanus)
Common poorwill (Phalaenoptilus nuttallii)	Red-tailed hawk (Buteo jamaicensis)
Common raven (Corvus corax)	Rock wren (Salpinctes obsoletus)
Ferruginous hawk (Buteo regalis)	Sage sparrow (Amphispiza belli)
Gray flycatcher (Epidonax wrightii)	Sage thrasher (Oreoscoptes montanus)
Great-horned owl (Bubo virginianus)	Say's Phoebe (Sayornis saya)
Green-tailed towhee (Pipilo chlorurus)	Turkey vulture (Cathartes aura)
Horned lark (Eremophilia alpestris)	Vesper sparrow (Pooecetes gramineus)
Killdeer (Charadrius vociferus)	Western meadowlark (Sturnella neglecta)

3.2.6. Native American Religious Concerns

In accordance with the National Historic Preservation Act (P.L. 89-665), the NEPA, the FLPMA (P.L. 94-579), the American Indian Religious Freedom Act (P.L. 95-341), the Native American Graves Protection and Repatriation Act (NAGPRA) (P.L. 101-601), EO 13007, EO 13175, and Secretarial Order 3317, the BLM must provide affected tribes an opportunity to comment and consult on the proposed communication site. The BLM must attempt to limit, reduce, or possibly eliminate any negative impacts to Native American traditional/cultural/spiritual sites, activities, and resources.

On September 6, 2012, letters providing information related to the Proposed Action were sent to Ft. McDermitt Paiute and Shoshone Tribe, and the Winnemucca Colony. The Fort McDermitt Paiute and Shoshone Tribe voiced no concerns concerning the project when it was brought up in a consultation meeting on September 17, 2012. To date, no traditional cultural properties or EO 13007 sites have been identified within the Project Area that might be impacted by the Proposed Action or alternatives. No concerns have been voiced by the tribes. This resource is not further analyzed in this EA.

3.2.7. Threatened and Endangered Species

There are no known threatened or endangered (T&E) species nor is the habitat conducive for T&E species to be present in the proposed ROW area.

Additional Affected Resources

3.2.8. Lands and Realty

The Project Area is located within the checkerboard lands of northern Nevada where the alternate sections are a part of the National System of Public Lands (NSPL)administered by the BLM and private land (Figure 1.1.1). The NSPL within the Project Area are open public domain lands that

have a multiple use designation by the BLM. The lands in the Project Area are zoned by Humboldt County as M-3: low density development. The Project Area and immediate vicinity is utilized for several other uses: three Federal Highways (NVCC-018401, N-30534, and N-32871), four telephone lines ROW (N-41350, N-60191, N-88132, and N-56913), four road ROWs (N-24287, N-41031, N-41033, and N-62200), and a Recreation and Public Purpose (R&PP) (N-51093–02) re-conveyance to the United States.

3.2.9. Paleontology

The BLM manages paleontological resources under a number of federal laws including the following: FLPMA Sections 310 and 302(b), which direct the BLM to manage public lands to protect the quality of scientific and other values; 43 CFR 8365.1-5, which prohibits the willful disturbance, removal, and destruction of scientific resources or natural objects; 43 CFR 3622, which regulates the amount of petrified wood that can be collected for personal, noncommercial purposes without a permit; and Paleontological Resources Protection Act: 123 STAT. 1176 Section 6309 (2009).

There are no known paleontological resources in the project area. The project area is classified as Potential Fossil Yield Category 3 (moderate potential for paleontological resources). No impacts to paleontological resources are foreseen under the proposed action or no action alternative, therefore, this resource is dismissed from further analysis.

3.2.10. Public Health and Safety

Highway 95 currently provides for access to the Sand Dunes Subdivision. The area has grown in recent years with large tracts of new development. Highway 95 has no acceleration lanes. Right turn pockets exist in the North bound lanes for Artemisia, McCrae and Delaney, however no left turn pockets exist at any of these locations. The speed limit for this stretch of Highway 95 is 70 miles per hour.

There is no road in the subdivision that completely provides north/south access within the subdivision. Old Tollhouse Road provides the some access between the northern and southern portions, but terminates at Bronco Drive. Other roads in this area are a mixture of maintained and un-maintained roads. The speed limit within the subdivision is 25 miles per hour. An unauthorized road that runs along the east side of Highway 95 from Delaney to Bruce Drive was created shortly after NDOT removed access to Highway 95 from Bruce Drive. This un-maintained road is frequently used by individuals who may or may not be aware that this road is unauthorized.

3.2.11. Recreation

BLM administered lands in Humboldt County provide opportunities for a wide variety of outdoor recreation activities and benefits. While most recreation users participate in dispersed recreation activities either individually or in small groups, others participate in organized events as participants or spectators. Many types of dispersed and organized uses provide for a diverse range of visitor needs and expectations. The BLM manages a large percentage of the land base adjacent to the project area thereby making BLM lands a critical resource for providing recreation opportunities to visitors.

In particular, dispersed recreation and occasional organized and permitted events do occur in and around the sand dunes on the north side of US Highway 95 and adjacent to the project area. The organized/permitted events typically involve competitive motorcycle races and OHV instruction. Dispersed recreation activities include but are not limited to individual OHV use, camping, hunting, sightseeing, photography, picnicking, hiking and mountain bike riding. The BLM does maintain a kiosk at the sand dunes in this area for the assimilation of information regarding private lands, camping ethic, BLM contact numbers and other safety information. No fees are charged for the use of these public lands.

3.2.12. Social Values and Economics

Based on current property values and existing infrastructure, the neighborhood that would be served by the proposed ROW is economically disadvantaged in comparison to the surrounding Winnemucca community. Current access to properties in the neighborhood are characterized by use of an unauthorized road near the Highway 95 corridor, user-made two-track roads and trails connecting between segments of constructed roads, and inadequate access for local residents.

3.2.13. Soils

The proposed ROW area is defined by dune land soils demonstrating fine sand surface textures. The proposed location is dominated by soils with moderate wind erosion ratings due to these fine sandy surface layers. The dominant soil is classified as Dune land-Goldrun-Davey association, rated fair for road construction (NRCS, Humboldt County (2013b), BLM (2006)).

The presence of biological soil crusts in the project area is highly unlikely due to the unfavorable, mobile, fine sandy surface texture and frequent motorized traffic disturbances.

3.2.14. Special Status Species

The natural habitat features of the area could potentially support several BLM special status species as a foraging area, nesting, permanent or temporary refuge. The presence of numerous abandoned buildings and vehicles along with trees and shrubs could provide refuge habitat particularly for bats. Table 3.4, "BLM Sensitive Mammals", Table 3.5, "BLM Sensitive Birds", Table 3.6, "BLM Sensitive Plants", and Table 3.7, "BLM Sensitive Insects" lists the BLM special status species that are known to or could potentially be using the proposed disturbance area. Although other BLM special status species could be found in this type of natural habitat, the location of this project (proximity to humans, noise) would deter habitation. Those species are omitted from the following lists.

Nevada Natural Heritage Program (NNHP) has documented two BLM sensitive insect species, Humboldt serican scarab (*Serica humboldti*) and Rice's blue (*Euphilotes pallescens ricei*) as being near the proposed project area. A literature search was conducted by staff biologists on distribution and habitat requirements for these species in relation to the proposed project area. The Humboldt sercian scarab is thought to be more closely associated with finer sands and sparser vegetation. The literature review revealed *Eriogonum* spp. and *Oxytheca* spp. plant species were associated with *Euphilotes* spp. However specific host plants for Rice's blue have not as yet been definitively identified. Also the literature search revealed a survey where an *E. pallescens ricei* larvae had been collected on *Eriogonum kearneyi* along Sand Pass Road in September of 2007. This location lies approximately 2.5 to 3 miles away as the crow flies from the project area.

In late July 2013 an intuitive survey of *Eriogonum* spp. was conducted along Sand Pass Road and down grade along highway 95 North. Staff surveyed on either side of the road (approx. 30 meters) to establish presence or absence of *Eriogonum* spp. The survey continued along the proposed ROW for the Mayhew Drive project traveling approximately 30 meters either side of proposed centerline. Soil surface texture along with the presence of Lemon scurfpea, indian ricegrass, some needleandthread grass, rabbit brush, and limited big sagebrush shrub cover spoke to the low productivity and shifting surface and depositional nature of the Duneland soil that would preclude the establishment of *Eriogonum* spp. No *Eriogonum* spp were observed during the survey.

Table 3.4. BLM Sensitive Mammals

Big brown bat (Eptesicus fuscus)
California myotis (Myotis californicus)
Dark kangaroo mouse (Microdipodops megacephalus)
Fringed myotis (Myotis thysanodes)
Humboldt sericum scarab (Serica humboldtii)
Little brown myotis (<i>Myotis lucifugus</i>)
Pale kangaroo mouse (Microdipodops pallidus)
Pallid bat (Antrozous pallidus)
Townsend's big-eared bat (Corynorhinus townsendii)
Western pipistrelle (Pipistrellus hesperus)
Western small-footed myotis (Myotis ciliolabrum)
Yuma Myotis (Myotis yumanensis)

Table 3.5. BLM Sensitive Birds

Brewer's sparrow (Spizella breweri)
Ferruginous hawk (Buteo regalis)
Golden eagle (Aquila chrysaetos)
Loggerhead shrike (Lanius ludovicianus)
Peregrine falcon (Falco peregrinus)
Sage thrasher (Oreoscoptes montanus)

Table 3.6. BLM Sensitive Plants

Sand Cholla (Grusonia pulchella)
Pueblo Valley peppergrass (Lepidium montanum var nevadense)
Oryctes (Oryctes nevadensis)
Nevada dune beardtongue (Penstemon arenarius)
Lahontan indigobush (Psorothamnus kingii)*

^{*}State listed species

Table 3.7. BLM Sensitive Insects

Humboldt sericum scarab (Serica humboldti)
Rice's blue (Euphilotes pallescens ricei)

3.2.15. Vegetation

Dominant perennial vegetation for the proposed ROW location would consist of Indian ricegrass (*Achnatherum hymenoides* (Roem. & Schult.) Barkworth), needle and thread grass (*Hesperostipa comata*), bottlebrush squirreltail (*Elymus elymoides* (Raf.) Swezey), horsebrush (*Tetradymia sp.*),

spiny hopsage (*Grayia spinosa* (Hook.) Moq.), basin and Wyoming big sagebrush (*Artemisia tridentata* (Nutt.)). In areas of drifting sand or repeated surface disturbances, such as frequented existing two-tracks or other traffic, sparse vegetation cover exists, composed mostly of annual forbs and grasses, such as, mustards (*Brassica sp.*), fiddleneck (*Amsinckia sp.*), cheatgrass (*Bromus tectorum L.*)

3.2.16. Visual Resources

Visual resources are the visible physical features on a landscape such as land, water, vegetation, animals and structures.

Scenic quality is a measure of the visual appeal of a parcel of land. Section 102(a) (8) of FLPMA placed an emphasis on the protection of the quality of scenic resources on public lands. Section 101 (b) of NEPA of 1969 required that measures are taken to ensure that aesthetically pleasing surroundings be retained for all Americans.

To insure those objectives are met, The BLM devised the Visual Resource Management (VRM) system. The VRM system provides a means to identify visual values, establish objectives for managing these values and provide information to evaluate the visual effects of proposed projects. The inventory of visual values combines evaluations of scenic quality, sensitivity levels and distant zones to establish visual resource inventory classes. These classes are "informational in nature and provide the basis for considering visual values in the land use planning process. They do not establish management direction and should not be used as a basis for constraining or limiting surface disturbing activities" (BLM 1986).

VRM classes are typically assigned to public land units through the use of the visual resource inventory classes in the BLM's land use planning process. One of four VRM classes is assigned to each unit of public lands. The specific objectives of each VRM class are presented in <u>Table 3.8</u>, "– BLM Visual Resource Management Classes"

Table 3.8. – BLM Visual Resource Management Classes

Class	Description			
I	Preserve the existing character of the landscape. This class provides for natural ecological changes but does			
	not preclude very limited management activity. The level of change to the characteristic landscape should be			
	very low and must not attract attention			
II	Retain the existing character of the landscape. The level of change to the characteristic landscape should			
	be low. Management activities may be seen but should not attract the attention of the casual observer. Any			
	changes must repeat the basic elements of form, line, color, and texture found in the predominant natural			
	features of the characteristic landscape.			
III	Partially retain the existing character of the landscape. The level of change to characteristic landscape			
	should be moderate. Management activities may attract attention but should not dominate the view of the			
	casual observer. Changes should repeat the basic elements found in the predominant natural features of the			
	characteristic landscape.			
IV	Provide for management activities that require major modification of the existing character of the landscape.			
	The level of change to the characteristic landscape can be high			

(BLM 1986)

In general, the public lands within Humboldt County could be described as the 'classic' panoramic Nevada landscape characterized by vast and open spaces with a back drop of tall mountains. Predominate vegetation in this area consist of sagebrush and grasses with areas of exposed sand, soil and rock. The dominant natural features consist of low rolling hills of white sand. Man-made

structures include a state high way, paved and unpaved roads with associated rights-of-way fence lines, transmission lines and structures associated with small rural communities such as individual homes, businesses and ranch operations of various sizes.

The proposed Mayhew ROW exists in VRM Class II and III and as such require the completion of a Contrast Rating field exercise as per BLM Handbook 8431-1 Visual Resource Contrast Rating. A Contrast Rating exercise was conducted and the Proposed Action meets the objectives of Class II and III VRM ratings.

3.2.17. Wildlife

The proposed disturbance area does not provide suitable habitat for amphibians, fish, mulloscs or other aquatic dependent animals. However, a variety of mammals and reptiles that are tolerant to human, disturbance, (as well as avian species previously discussed) could utilize the area. California quail (*Callipepla california*) are also abundant occupants. Table 3.9, "Mammals Typically Associated With the Habitat in the Mayhew ROW" and Table 3.10, "Reptiles Typically Associated With the Habitat in the Mayhew ROW" provide a representative list of these species.

Table 3.9. Mammals Typically Associated With the Habitat in the Mayhew ROW

Bats (various species)	Little pocket mouse (Perognathus longimembris)
Black-tailed jack rabbit (Lepus californicus)	Merriman's shrew (Sorex merriami)
Bobcat (Felis rufus)	Northern grasshopper mouse (Onychomys leucogaster)
Bushy-tailed woodrat (Neotoma cinerea)	Northern pocket gopher (<i>Thomomys talpoides</i>)
Coyote (Canis latrans)	Ord's kangaroo rat (Dipodomys ordii)
Deer mouse (Peromyscus maniculatus)	Sagebrush vole (<i>Lagurus curatus</i>)
Desert cottontail (Sylvilagus auduboni)	Stripped skunk (Mephitis mephitis)
Great basin kangaroo rat (Dipodomys microps)	Townsend's ground squirrel (Spermophilus townsendii)
Great Basin pocket mouse (Perognathus parvus)	Townsend's pocket gopher (<i>Thomomys townsendii</i>)
Kit fox (Vulpes macrotis)	Western harvest mouse (Reithrodontomys megalotis)
Least chipmunk (Tamias minimus)	White-tailed antelope squirrel (Ammonospermophilus
	leucurus)

Table 3.10. Reptiles Typically Associated With the Habitat in the Mayhew ROW

California king snake (Lamrpopelitis getulus californiae)	Long-nosed leopard lizard (Gambelia wislizenii)
Desert night snake (Hypsiglena torquata deserticola)	Northern sagebrush lizard (Scleoporus graciosus)
Desert horned lizard (Phrynosoma platyrhinos)	Northern side-blotched lizard (Utal stansburiana
	stansburiana)
Great Basin collared lizard (Croatphytus bicinctores)	Western ground snake (Sonora semiannulata)
Great Basin fence lizard (Sceloporus occidentalis	Western long-nosed snake (Rhinocheilus lecontei
biseriatus)	lecontei)
Great Basin gopher snake (Pituophis melanoleucaus	Western patch-nose snake (Salvadora hexalepis)
deserticola)	
Great Basin rattlesnake (Crotalus viridis lutosus)	Western yellow-bellied racer (Coluber constrictor
	mormon)
Great Basin skink (Eumeces skiltonianus utahensis)	Yellow-backed spiny lizard (Sceloparus magister
	uniformis)
Great Basin whiptail (Cnemidophorus tigris tigris)	Zebra-tailed lizard (Callisouris draconides)

Chapter 4. Environmental Effects:

4.1. Direct and Indirect Impacts

The direct and indirect effects of the Proposed Action and the No Action Alternative on resources present and brought forward for analysis are discussed in this section. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8). Cumulative impacts are discussed separately in Section 4.2, "Cumulative Impacts".

4.1.1. Air Quality

Proposed Action

Project related construction activities would have minimal impact to air quality through creation of fugitive dust and the generation of exhaust emissions from equipment over the period of time needed to complete the proposed action. Humboldt County Road Dept. would reduce fugitive dust creation by utilizing a water truck to minimize dust, as necessary, throughout the construction process. This measure along with reducing activity to a small construction footprint in addition to an expected short time frame to completion would minimize impacts to surrounding ambient air quality to such an extent that impacts to air quality will not need to be further analyzed in this document.

No Action

No impacts to air quality would occur in addition to existing fugitive dust creation and exhaust emissions taking place from current vehicular traffic in the project area.

4.1.2. Cultural Resources

Proposed Action

No known cultural resources have been identified within the project area (see <u>Section 3.2.2</u>, <u>"Cultural Resources"</u>). Therefore, no direct, indirect or adverse effects are anticipated as a result of the proposed action and this resource is not further analyzed in this EA.

No Action

No known cultural resources have been identified within the project area (see Section 3.2.2, "Cultural Resources"). Therefore, no direct, indirect or adverse effects are anticipated as a result of the no action alternative.

4.1.3. Environmental Justice

Proposed Action

The Proposed Action would not disproportionately affect any economically disadvantaged residents of the neighborhood surrounding the proposed ROW. The proposed action would provide different access within the subdivisions to local residents and land owners than what

is currently available. Accessibility would be improved through the proposed upgrades and subsequent road maintenance. Better accessibility could lead to a more developed neighborhood. It could also lead to increased impacts from traffic to residents along routes that would be created or improved through the proposed action. These potential impacts include increased visual and physical access to their properties by passers-by, increased localized dust, and increased noise.

No Action

If the No Action alternative is selected, the surrounding community would continue in its current state from the standpoint of future opportunities for economic development. From the perspective of those who could benefit from better access and to the degree that other neighborhoods enjoy better access and traffic flow, the neighborhood of Mayhew Drive would suffer a disproportionately lower quality of life due to impaired access as well as from neighborhood-level blowing dust from (and traffic on) unimproved and unauthorized roads and trails. From the perspective of those whose properties abut proposed new or improved roads, there would be possible comparative benefits from less traffic impacts.

4.1.4. Invasive and Nonnative Species

Proposed Action

The proposed action would create both permanent and temporary disturbance corridors. The permanent disturbance corridor would exist in the form of an improved and active roadbed, within which there would be little or no opportunity for the establishment of noxious weeds due to traffic and severe soil compaction. The temporary disturbance corridor would be created during initial construction, and then removed through the establishment of stands of perennial grasses as the construction disturbance area is re-seeded and vegetation has become established. The uncompacted gravel along the road shoulder would provide an opportunity for noxious weed establishment. However, because the project area is located within a portion of the district which is highly disturbed and which has an exceedingly high density of "checkerboard" private lands and road systems, the temporary opportunity for establishment of noxious weeds within small amount of disturbance caused by the proposed ROW would not substantially increase the risk of further noxious weed infestation either locally or to the Winnemucca District at large.

No Action

If no action is taken, the ROW and associated disturbance described in the proposed action would not be implemented and there would be no increased opportunity for the establishment of noxious weeds within the vicinity.

4.1.5. Migratory Birds

Proposed Action

Implementing seasonal and temporal mitigation measures as described in <u>Section 2.1.1</u>, <u>"Environmental Protection Measures"</u> would reduce impacts of road construction to nesting migratory birds in the immediate area. If construction activities were to take place during the breeding season, construction noise and human activity would displace individual birds from the immediate area and possibly disrupt breeding and foraging behavior.

Construction of the road would result in the permanent loss of habitat. Suitability and use of remaining habitat alongside the road for foraging and nesting would also be jeopardized because of traffic noise, dust levels, and intolerance of human disturbance and proximity.

Land disturbance caused by construction activities and subsequent vehicular traffic would increase the likelihood of introducing invasive plants in areas alongside the road. Invasive plants out-compete native vegetation that migratory birds directly or indirectly depend upon. Implementation of EPMs for small mammals would reduce these impacts.

No Action

No habitat would be lost due to road construction and migratory birds would be expected to utilize the area at the current level of use or as determined by natural environmental changes.

4.1.6. Lands and Realty

Proposed Action

Lands and Realty uses within and around the Project Area consist primarily of utility ROWs, communication sites, federal highways, roads, and an R&PP re-conveyance to the United States. Two telephone lines are located within the Project Area. Impacts to land use authorizations and access would be minimal because project-related activities would occur adjacent to existing ROWs. Any impacts to public access would be temporary and short-term during construction. No long-term impacts to public access to and from Highway 95 are expected. No direct, indirect, or adverse effects are anticipated as a result of the proposed action. This resource is not further analyzed in this EA.

No Action

Under the No Action Alternative, the county road would not be constructed; therefore, impacts from the Proposed Action would not occur. Operation and maintenance activities for authorized ROWs within the Project Area would continue. Impacts to existing access routes resulting from the No Action Alternative would be similar to the Proposed Action. The use of the unauthorized road East of Highway 95 would continue unabated.

4.1.7. Public Health and Safety

Proposed Action

No immediate threat to health and safety of the public would be caused by the Proposed Action. Mayhew Drive would be extended to provide a safe, internal north/south access route within the Sand Dunes Subdivision, thereby improving traffic flow. The road extension would also include improvements to the intersections of Mayhew and Bruce, Sarah, Delaney, Baker, and Bronco Streets. Additionally, Bronco, Bruce, and Mayhew roads would be placed on the County's routine maintenance schedule. Sand removal would occur at least 3 times per year and road re-grading would occur 2 to 4 times per year, thereby removing buildup of sand blown over the roadway from the Sand Dune recreational area to the west of Highway 95.

Temporary impacts to public health and safety would be minor hazards associated with the presence of equipment during construction and maintenance activities.

No increase in traffic would be expected as a direct result of the Proposed Action. Humboldt County has no immediate plans to develop parcels in the area. If residential units increase, traffic in the area would proportionally increase. Upgrades to these roads would allow for safer travel under this circumstance.

These impacts would be localized to the project area. This resource is not further analyzed in this EA.

No Action

If no action is taken, the ROW and the associated hazards with road construction and maintenance would not be implemented. North/south travel within the subdivision would continue to rely on Highway 95 and use of the unauthorized and unmaintained road.

4.1.8. Recreation

Proposed Action

The Proposed Action would not affect the recreation opportunities in the area of the proposed project. Impacts, if any, to recreation would be temporary and minimal due to the location of the project and the temporary nature of road construction. No mitigation measures would be necessary. Because recreational use within Humboldt County in general and the sand dunes in particular is expected to continue consistent with past and present use, cumulative impacts as a result of the Proposed Action, if any, would be negligible. Therefore this resource is dismissed from further analysis.

No Action

Opportunities for recreation would not be affected under the No Action Alternative. Therefore this resource is dismissed from further analysis.

4.1.9. Social Values and Economics

Proposed Action

Although Humboldt County does not have plans to develop the community at this time, the Proposed Action would provide increased opportunities for economic development within the immediate neighborhood. Increased ease of access, better traffic flows, increased safety, and improved roadways would contribute to the potential for higher future property values and consequently a general improvement in neighborhood economic conditions for those who own developable properties or properties that are for sale in the neighborhood. Future potential real estate developments in the neighborhood would benefit from approval of the proposed ROW in terms of easier access, improved roads and aesthetic conditions. Access to unauthorized trails and roads that are currently being used to travel within the neighborhoods would be minimized or eliminated. It is uncertain what the economic impact would be on properties that abut proposed new or improved roads. Improved access could increase these properties' values, or those values could possibly be decreased due to increased traffic passing by, depending on future market preferences. Any increase in traffic would be proportional to the potential increase of residents in the area over time.

No Action

If no action is taken, the neighborhood surrounding the proposed Mayhew ROW would continue on its current economic trajectory. Use of unauthorized trails and roads would likely continue.

4.1.10. Soils

Proposed Action

Project related activities could contribute to the creation of fugitive dust and subsequent soil loss due to wind erosion over the period of time needed to complete the proposed action. Humboldt County would reduce fugitive dust emissions by implementing best management practices. A water truck would be used to minimize fugitive dust, as necessary. These protection measures and activities would minimize impacts to soils.

No Action

No impacts to soils would occur in addition to current disturbances taking place from vehicular traffic in the project area.

4.1.11. Special Status Species

Proposed Action

Construction of the road would result in the permanent loss of habitat for plants and animals including those with special status species designation. Sensitive species commonly gain this dubious distinction because of their dependency on specific environmental conditions and low numbers of individuals. As a result, sensitive species are particularly vulnerable to the effects of habitat destruction. Suitability and use of remaining habitat alongside the road would be jeopardized because of the introduction of invasive plant species, traffic noise, dust levels, and intolerance of human noise and proximity. Construction and subsequent use and maintenance of the road increases the likelihood of invasive plant introduction in areas alongside the road, thus altering the vegetative component of the habitat supporting special status species. Loss of surface area for plant establishment and regeneration, increased resource competition due to the introduction of invasive species, and the increased potential for wildfires and the effects thereof would be the impacts to special status plants.

Impacts of the road construction would be detrimental to the kangaroo mice population of this area because of the mice's relatively small home range (the area to which an animal usually confines its daily activities), and their inability to travel great distances. The establishment of roads causes habitat fragmentation and degradation and would impede access to suitable habitat for these mammals. Confinement to areas fragmented by roads would increase resource competition resulting in decreased vigor, lower birthrates, increased mortality, and decreased genetic variability among the kangaroo mice. Mice attempting to cross the roads are more susceptible to predation and fatal vehicular collisions. Fragmentation and increased human access could also increase the potential for destructive wildfires which would result in direct mortality, and indirect mortality due to resource losses.

These impacts would be reduced by protective measures in <u>Section 2.1.1</u>, "<u>Environmental</u> Protection Measures"

No Action

No habitat would be lost due to road construction and BLM sensitive species would be expected to utilize the area at the current level of use or as determined by naturally occurring environmental changes

4.1.12. Vegetation

Proposed Action

The proposed action would cause the removal of any vegetation present in the road construction area. The impacted vegetation types would be sagebrush or salt desert shrub plant communities with a perennial grass understory (Sandberg's bluegrass, *Poa secunda*) or invasive annual forbs and grasses, such as, mustards, fiddleneck, cheatgrass.

No Action

No impacts to existing vegetation would occur in addition to current disturbances taking place from vehicular traffic in the project area.

4.1.13. Visual Resources

Proposed Action

A primary requirement of a VRM Class II is that the level of change should be low and the existing character of the landscape be retained. The proposed Mayhew road ROW is consistent with VRM Class II and III in that its location is within and adjacent to the existing roads and housing developments and would not attract the attention of the casual observer traveling at 70 MPH on state highway 95. Since no visual changes are anticipated, this resource is dismissed from further analysis.

No Action

Since under the No Action Alternative there would be no change to the existing landscape or setting, this resource is dismissed from further analysis.

4.1.14. Wildlife

Proposed Action

Construction of the road would result in the permanent loss of habitat. Suitability and use of remaining habitat alongside the road would also be lessened because of traffic noise, dust levels, and intolerance of human disturbance and proximity. Soil disturbance caused by construction activities and subsequent vehicular traffic would increase the likelihood of introducing invasive plants in the areas alongside the road. Invasive plants out-compete native vegetation that wildlife depend upon. The road would further fragment the habitat in the area potentially resulting in more animal/vehicle fatalities and a decrease in genetic diversity. The mortality and displacement of reptiles and smaller mammals such as rodents would be expected during construction and as a result of permanent loss of habitat. Fragmentation and increased human access could also increase the potential for destructive wildfires which would result in direct mortality and indirect mortality due to resource losses.

These impacts would be reduced by protective measures identified in <u>Section 2.1.1</u>, "Environmental Protection Measures".

Larger, more mobile wildlife such bobcat, coyote, and fox would be able to avoid the area and be largely unaffected.

No Action

No habitat would be lost due to road construction and wildlife would be expected to utilize the area at the current level of use or as determined by naturally occurring environmental changes.

4.2. Cumulative Impacts

A cumulative impact is defined under federal regulations as follows:

"...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7).

4.2.1. Assumptions for Cumulative Analysis

Direct and indirect consequences of the Proposed Action and No Action alternative were evaluated previously in Section 4.1, "Direct and Indirect Impacts" for the various environmental resources. As required under the NEPA and the regulations implementing the NEPA, this section addresses cumulative effects on those resources that have the potential to be incrementally impacted by the Proposed Action or No Action Alternative within the identified Cumulative Effects Study Area (CESA). Based on the preceding analysis in Section 4.1, "Direct and Indirect Impacts", no cumulative impacts are expected for the following resources: Air Quality, Cultural Resources, Public Health and Safety, and Lands and Realty. The Special Status Species, Migratory Birds and Wildlife resources and the Soils and Vegetation resources have been grouped due to similarity in expected cumulative impacts.

Description of Cumulative Assessment Area Boundary

The CESA for this EA was determined by the BLM Interdisciplinary Team (IDT) on January, 10, 2013. The scale, context, magnitude and intensity of the project and the potentially affected resources were taken into account. Based on this review, the IDT determined that the extent of cumulative impacts would not likely reach beyond the watershed of the Little Humboldt River (hydrographic unit code (HUC) 10 boundary). The area consists of approximately 116,633 acres of which about 39,806 acres are public lands and 76,827 acres are private lands. (see CESABoundary Map).

4.2.2. Past and Present Actions

On the basis of agency records (LR 2000), GIS analyses, and interdisciplinary team discussion, the following past and present actions within the assessment area which have impacted the affected resources have been identified. The LR2000 database was queried on June 5, 2013

(BLM 2013b). Any approved projects that were added to the LR2000 database after this date are not included in the analysis.

Mineral Exploration and Mining Projects: Mineral exploration projects within the cumulative assessment area include mineral material disposal and mineral locatables totaling 86 acres. Mining projects are comprised of active mining claims totaling 4,460 acres.

Transportation Networks: Several Federal Highways (including Highway 95), County, and non-County roads are located within the CESA boundary and total 752 acres.

Lands and Realty Actions: Within the CESA boundary, ROWs (transmission lines, power facilities, communication sites, and oil and gas pipelines), withdrawals, land sales, exchanges, acquisitions, and R & PP convenyances within the CESA area total3,803 acres. Residential, commercial, and industrial development has increased in the assessment area with higher concentrations within the checkerboard private parcels along the East side of Highway 95 North. Along with the development, there has been an increase in the area of paved gravel and unimproved travel routes connecting the various sub-divisions.

Rangeland Management: Livestock grazing has a long history in the region dating back to the late 1800s. Throughout its' history, ranching has remained a dispersed activity characterized by localized areas of more intensive use. Over the last twenty years, grazing use within the assessment area has declined as residential development has expanded. The CESA area includes portions of the following grazing allotments:

Allotment Name	Total Allotment Acres	Acres of Allotment within the CESA boundary
Golconda Butte	48,992	25,468
Bloody Run	68,879	24,338
Sand Pass	39,857	17,902
Eden Valley	62,104	12,787
Sand Dunes	167,457	700
Totals:	387,289	81,195

Range improvement projects include water developments (1 water trough, 1 wells, 1 spring developments, 1 pipeline), 2 fences, 7 cattleguards, and 1 corral.

Vegetative Treatment: One fuelbreak, approximately 173 acres exists on Highway 95. Approximately 20,023 acres have been aerially seeded, and approximately 15,088 acres have been drill seeded for vegetation rehabilitation efforts. The BLM recently approved a 7 mile fuel break extension along Highway 95.

Wildfire: Approximately 216,700 acres have burned within the CESA between 1981–2012.

Recreation: Dispersed recreational activities in the area include hunting, hiking, biking, rock hounding, and OHV use. The sand dunes and Winnemucca Hike Bike Trail are located within the CESA. Dispersed recreation occurs throughout the CESA; however, there is no data on the level of use.

4.2.3. Reasonably Foreseeable Future Actions

The past and present actions identified above are expected to continue, though the relative intensity of these actions could vary depending on a variety of economic and other factors. Population within the Winnemucca District is anticipated to increase (BLM 2005). Dispersed

residential development could expand on privately held parcels depending on economic conditions. Historically, the long-term pattern has been characterized by fluctuation and is likely that residential development will expand and contract at various points in the foreseeable future. Pending Lands and Realty actions include: one land sale; one exchange; two road ROWs; one withdrawal; and one acquisition, totaling 4,774 acres. Due to high costs, the expansion of urban services into these areas is considered unlikely and the present pattern of individual water wells and septic systems on large residential lots will probably continue. Recreational uses of the assessment area will probably increase as a function of anticipated population growth in the region. Some activities, such as OHV use, are anticipated to increase substantially.

4.2.4. Cumulative Impacts to Affected Resources

Impacts associated with past, present, and reasonably foreseeable future actions are generally created by ground or vegetation-disturbing activities that effect natural and cultural resources in various ways. Of particular concern is the *accumulation* of these impacts over time. This section of the EA considers the nature of the cumulative effect and analyzes the degree to which the proposed action and no action alternative contribute to the collective impact.

4.2.4.1. Environmental Justice

Impacts from Past and Present Actions

Based on County tax records and aerial imagery, residents living in the vicinity of the proposed action have been increasingly affected over time by unauthorized access trails and sub-standard infrastructure.

Potential Impacts from RFFAs

It is possible that future actions, absent approval of the requested ROW, will further degrade resources and would lead to a decreasing quality of life over time for the majority of residents in the immediate area.

Cumulative Impacts from the Proposed Action

Increased development in the local area could occur in response to road extension and improvements, leading to general increases in most property values. This could potentially bring local median property values closer to that of the general Winnemucca area and off-set impacts from past, present and RFFAs.

Cumulative Impacts from the No Action Alternative

Under the No Action Alternative, the current disadvantaged state of the neighborhood surrounding the proposed ROW would persist over time. It is possible that property values in the vicinity would lag further behind those of other parts of Winnemucca, leaving the neighborhood at an increasing disadvantage over time.

4.2.4.2. Invasive and Nonnative Species

Impacts from Past and Present Actions:

On the basis of aerial photographic data, agency records and GIS analysis, the following past and present actions, which have impacted the dispersal of invasive and nonnative species to varying degrees, have been identified: livestock grazing, residential, commercial, and industrial development, and recreational activity. Invasive species, including Russian thistle (*Salsola kali*), cheatgrass (*Bromus tectorum*), annual mustard species, and whitetop (*Cardaria draba*) have been introduced to the general vicinity as a result of these past uses and actions.

Potential Impacts from RFFAs:

Due to the nature of the extremely sandy soils present within the project area, combined with the extremely droughty nature of the site, there are not expected to be any substantial increase in invasive species dispersal or population expansion as a result of RFFAs.

Cumulative Impacts from the Proposed Action

Due to the history of disturbance within the project area, the extremely small size of the project and the extremely poor growing conditions present within the project area, invasive species population size and dispersal is not expected to be substantially effected by implementation of the proposed action.

Cumulative Impacts from the No Action Alternative

There would be no disturbance created under the No Action Alternative, and therefore no opportunity for invasive species to exploit disturbance as a result of implementation of the proposed action. Due to the small project size and the large amount of existing and continuing disturbance in the immediate project vicinity, the No Action Alternative would have no substantial effects to invasive species establishment or dispersal when compared with the potential effects of the proposed action.

4.2.4.3. Migratory Birds, Special Status Species and Wildlife

Impacts from Past and Present Actions:

The CESA is a mixture of residential and business development and outdoor recreational opportunities. There are numerous abandoned homes and vehicles and general debris as a result of human encroachment creating habitat for competitive, non-native animal species such as the house mouse (*Mus musculus*). As a result of human habitation, the CESA has become fragmented by roads and houses, native vegetation cleared and replaced with non-native and/or invasive plants or human-made structures. Off-road vehicle use and trespassing has further fragmented the area voiding sections from vegetation and creating areas susceptible to wind and water erosion. Human occupation, noise and habitat alteration has subtracted the amount of habitat available for wildlife's use.

It is possible that BLM special status species were killed or displaced during the development of the private property within the CESA.

Feral and tame domestic dogs and cats are commonplace and potentially affect the survival rate and reproductive success of migratory birds and other wildlife.

Potential Impacts from RFFAs:

Impacts from the past and present actions are expected to increase. As human population increases an increase in home construction/placement (and subsequent traffic) would be expected. Acres of vegetation (habitat) would be removed as part human encroachment activities thus eliminating wildlife habitat. Disturbance impacts to all wildlife in the form of direct and indirect mortality or displacement would result because of increased human activity and proximity, vehicular emissions and noise, increased wildfire hazard, dust, and fatal animal/vehicle collisions. Disturbance would also disrupt breeding behavior and jeopardize reproductive success. Any roadbed construction and use would prohibit the potential establishment of sensitive plants.

Cumulative Impacts from the Proposed Action

Construction of the proposed road would result in a diversion of traffic flow and increase in traffic through established residential areas and those areas that are not. The road would make more plots within the sub-division more easily accessible and an increase in home construction/placement (and subsequent traffic) would be expected. More acres of vegetation (habitat) would be removed as a result of road construction in addition to past, present, and RFFAs, thus eliminating wildlife habitat

Alterations in the vegetation component of the habitat due to past, present, and RFFAs and the proposed action would eliminate food sources (vegetative and prey base) and nesting habitat for migratory birds in the immediate area. The spread of invasive plant species would be further exacerbated. Potential cumulative impacts for general, smaller and less mobile wildlife would incrementally increase as a result of the implementation of the proposed action. Because of the small size of this project and the proximity and accessibility to similar and suitable habitat within and surrounding the CESA, the cumulative effects post-construction to migratory birds and general wildlife species is expected to be minimal.

Road construction would incrementally add to impacts to special status plants from past, present, and RFFAs. Road establishment would permanently remove areas where special status plants would be able to grow. Protective measures identified in Section 2.1.1, "Environmental Protection Measures" would offset some of these impacts on BLM land although they would not affect privately owned property.

The habitat disturbance and loss as a result of this proposed action can be expected to increase impacts to individuals of kangaroo mice in other areas of the CESA. The proposed action would fragment habitat, either isolating this population or displacing it to other areas in the CESA. Under either circumstance the result would be an increase in resource competition leading to decreased vigor, lower birthrates, increased mortality, and decreased genetic variability among the kangaroo mice within the CESA. The concentration of mice in a limited space makes them more susceptible to disease and predation. The proposed action would cumulatively add to the historic losses of special status species within the CESA. The loss of any individual of a special status species affects the species as a whole.

Cumulative Impacts from the No Action Alternative

Impacts associated with the proposed action would not occur; however, impacts from past, present and RFFAs are expected to continue. Special status species, migratory birds and general wildlife would be expected to utilize the area at the current level of use or as determined by naturally occurring or anthropogenic environmental changes not associate with the proposed action.

4.2.4.4. Social Values and Economics

Impacts from Past and Present Actions

The neighborhood surrounding the proposed ROW has been affected over time by establishment and use of unauthorized trails and roads. The lack of connecting roads has left some properties in the area with inadequate access as well as possibly leading to negative impacts on the quality of life in affected portions of the neighborhood.

Potential Impacts from RFFAs

Future property developments in the area combined with increased use of unauthorized trails and roads may contribute to ongoing degradation of the quality life and economic opportunity within the community.

Cumulative Impacts from the Proposed Action

Increased housing development in the local area could occur in response to road extensions and improvements, leading to general increases in property values. The potential exists for ongoing improvements in roadways and infrastructure that could result in long-term economic benefits for property owners and residents of the neighborhood. Conversely, properties that abut proposed new and improved roads could suffer increased impacts from nearby traffic.

Cumulative Impacts from the No Action Alternative

Under the No Action Alternative, the existing sub-standard infrastructure could further degrade, and establishment and use of unauthorized trails and roadways is likely to persist or increase. The overall appearance of undeveloped properties is not likely to change over time, and currently vacant properties could remain vacant into the foreseeable future. Properties along the edges of the proposed right-of-way would continue to be somewhat shielded from impacts from immediately-adjacent traffic.

4.2.4.5. Soils and Vegetation

Impacts from Past and Present Actions:

On the basis of aerial photographic data, agency records and GIS analysis, the following past and present actions, which have soils and vegetation to varying degrees, have been identified: livestock grazing, residential, commercial, and industrial development, and recreational activity. In some cases this has led to increased erosion and conversion of native plant communities to invasive annual grasslands, especially in the case of wildfires. Permitted activities such as livestock grazing and mining have incorporated better management strategies and rehabilitation requirements that have reduced impacts to vegetation and soils.

Potential Impacts from RFFAs:

All of the past and present actions discussed above are expected to persist into the foreseeable future, though the relative intensity of these actions could vary depending on a variety of economic and other factors. Impacts from RFFAs would in most cases incorporate some manner of rehabilitation or strategies to reduce impacts to soils and vegetation. Wildfires are likely to increase or at least remain at current levels, so there would likely be large scale degradation of

native plant communities associated with fire. Recreation is expected to increase over time which will lead to increased impacts to soils and vegetation from recreational activities, notably OHV use.

Cumulative Impacts from the Proposed Action

A cumulative impact on soil resources is expected to be minor from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs.

Cumulative Impacts from the No Action Alternative

A cumulative impact on soil resources is not expected from the No Action Alternative.

Chapter 5. Recommended Mitigation and Monitoring

5.1. Proposed Action

No mitigation measures were recommended beyond those environmental measures committed to by Humboldt County in <u>Section 2.1.1</u>, "<u>Environmental Protection Measures</u>". Periodic inspections would be required and conducted by the BLM to assure the County is in compliance with the Terms and Conditions of the ROW grant.

5.2. No Action Alternative

No mitigation measures or monitoring was recommended as part of the No Action Alternative.

Chapter 6. Tribes, Individuals, Organizations, or Agencies Consulted

6.1. Consultation

Executive Order 13007 and 13175, Secretarial Order 3317, BLM Manual H-8120–1, the American Indian Religious Freedom Act and the National Historic Preservation act require consultation with Native American Indian tribes that may be potentially affected by the Proposed Action. Letters informing the Winnemucca Indian Colony and the Fort McDermitt Paiute and Shoshone Tribe were sent on September 6, 2012. The Winnemucca Indian Colony has not responded to this letter or phone calls from the BLM. On September 17, 2012 the BLM met with Fort McDermitt Paiute and Shoshone Tribe to discuss a number of projects, including this one. The tribe voiced no concerns regarding the Proposed Action at this time.

On August 29, 2013 letters and hard copies of the Preliminary Environmental Assessment were mailed to the above tribes notifying them the document was available for review and comment. No responses were received.

6.2. Public Involvement/Outreach

Scoping activities conducted in support of this project included sending out a Dear Interested Party Letter with a project overview map. These materials were sent to the project's mailing list for a 30–day public scoping period ending on October 5, 2012. Refer to Section 1.5, "Scoping, Public Involvement and Issues:" for a summary of the results of scoping activities.

The preliminary environmental assessment was made available for public review and comment between August 29 through September 30, 2013. The document was available through the NEPA register, accessible through the BLM's website at: http://www.blm.gov/nv/st/en/fo/wfo/blm_information/nepa0.html. Letters were sent to interested publics identified on the projects mailing list notifying them of the documents availability. No comments were received.

Chapter 7. List of Preparers

Table 7.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Debbie Dunham	Project Lead, Realty Specialist	Lands and Realty
Rob Burton	Natural Resource Specialist	Vegetation/Soils/Air Quality
Rob Bunkall	GIS Specialist	GIS
Dr. Pat Haynal	Archaeologist	Cultural/Paleontology
Dr. Mark Hall	Archaeologist	Native American Consultation
Nancy Spencer-Morris	Wildlife Biologist	Special Status Species/T & E Species/General Wildlife
Joey Carmosino	Outdoor Recreation Planner	Recreation/Visual Resource Management
Kristine Struck	Wildnerness Specialist	Lands with Wilderness Characteristics
Eric Baxter	Natural Resource Specialist	Invasive/Non-Native Species
Zwaantje Rorex	Planning and Environmental Coordinator	NEPA Compliance/Public Health and Safety
Julie Suhr-Pierce	Socioeconomic Specialist	Social Economics/Environmental Justice
Derek Messmer	Humboldt River Field Manager	

Chapter 8. Maps

Project Area Map

Map 1.

CESA Boundary Map

Map 2.

November 2013 Chapter 8 Maps

Chapter 9. References



November 2013 Chapter 9 References

United States Fish and Wildlife Service (USFWS). 2002. *Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbance*. USFWS Utah Field Office, Salt Lake City, 2002.

November 2013 Chapter 9 References